2710
Concurrent Programming System

- Supports over 25,000 devices with voltages down to 1.5V (Vdd) including, but not limited to, EPROM, EEPROM, Flash EPROM, Microcontrollers, PLD, CPLD, FPGA, and antifuse FPGAs
- Supports device densities up to 4 Gbits
- FX4™ socket modules include 3 separate LED's per socket and allow the 2710 to program up to 24 devices simultaneously on a 6-site model
- Patented solution to guard against passing blank parts-available only from BPM Microsystems
- Uses USB 2.0 communications bus
- Compatible with all existing socket modules
- Supports all device packages, including, but not limited to, DIP, SDIP, PLCC, TSOP, SSOP, PCMCIA, QFN, MLF, LAP, SOIC, LCC, QFP, PQFP, PGA, SIMM, CSP, BGA, µBGA, TQFP and TSSOP
- Ideal for low to high-volume manual production
- Serialization support using standard, FX, FX2, and FX4 socket modules

**ST Microelectronics™ M28W640CB, program only.*

SEVENTH 7TH GEN GENERATION

2710™
Concurrent Programming System

Production-ready Flash Programming

The 2710 Concurrent Programming System® is the industry standard for programming throughput and speed, universal device support and high uptime. It combines the industry's fastest programming technology, 0.24s/Mb, BPM Micro's FX4™ socket modules and our Concurrent Programming System®. This powerful combination, unmatched in the industry, means higher throughput, reduced cost per device and faster turnarounds. What this means to you: higher profits for your business. By taking advantage of the proven 7th Generation technology, we have improved the site hardware to allow us the capability of programming devices with densities up to 4 Gbits. In addition, we have incorporated the industry's widely accepted high-speed USB 2.0 standard bus for communications.

Flash and Universal Support

The 2710 is designed specifically for today's highest density devices and their longer programming times, including Flash. It features the industry's fastest universal programming technology that programs a 64Mb device in just 15s*. The 2710 also uses BPM Micro's FX4™ socket modules. FX4™ socket modules program up to four devices simultaneously per site. With 2, 4, or 6 programming sites, the 2710 can program up to 24 devices at the same time and allows you to take advantage of up to four times the throughput.

BPM MICROSYSTEMS

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2710
Technical Specifications

GENERAL

Power:	90-260VAC, 47-63 Hz., .12 KVA per site, IEC inlet connector for worldwide use
Dimensions and Masses:	↴
2-site model	21.55" (547mm) x 8.65" (220mm) x 4.68" (119mm), 12.2 lbs. (5.5 kg)
4-site model	21.55" (547mm) x 16.10" (409mm) x 4.68" (119mm), 21.5 lbs. (9.6 kg)
6-site model	31.35" (796mm) x 16.10" (409mm) x 4.68" (119mm), 31.5 lbs. (14.3 kg)

SOFTWARE

Required:	BPWin
File Type:	binary, Intel, JEDEC, Motorola, POF, RAM, straight hex, hex-space, Tekhex, Extended Tekhex, ASCII hex, Formatted Binary (.DIO), AFM, OMF, LOF, MER, and others
Device Commands:	blank, check sum, compare, options, program, test, verify, erase
Features:	data editor, revision history, session logging, on-line help, device and algorithm information

HARDWARE

Architecture:	Concurrent Programming System
Sites:	2, 4, or 6 per chassis; multiple chassis may be linked
Calibration:	annual, may be performed on site
Diagnostics:	pin continuity test, RAM, ROM, CPU, pin drivers, power supply, communications, cables, calibration, timing, ADC, DAC, interconnects
Memory:	512MB per site
User Interface:	Pass, Fail, Active, Start LEDs and Start switch on each site; PC display shows systems status at a glance; auto-start mode automatically begins programming when device is inserted
PC System Requirements:	Microsoft Windows 2000 or above
Operational Temperature:	41° to 104° F (5° to 40°C)

STANDARD ACCESSORIES

Included:	software on CD-ROM user manual on CD-ROM power cable data cable 1-year hardware warranty 1-year software support

PIN DRIVERS

Quantity:	240-pins standard
Analog Slew rate:	0.3 to 25V/µs
Vpp Range:	0-25V in 25mV steps
Ipp Range:	0-70mA continuous, 250mA peak
Vcc Range:	0-12V
Icc Range:	0-1A, 12µA resolution
Very low voltage:	to 1.5V (Vdd)
Rise Time:	800ps
Overshoot:	none
Clocks:	continuously variable 1 MHz to 30 MHz
Protection:	overcurrent shutdown, power failure shutdown
Independence:	pin drivers and waveform generators are fully independent and concurrent on each site

FEATURES

File Loading:	automatic file type identification; no download time because programmer is PC controlled; supports Intel, JEDEC, Motorola S-record, POF, straight hex, hex-space, Tekhex, and other file formats
Device Selection:	intelligent device selector allows you to type as little or as much of the part number as you like then choose from a list of devices matching your description
Devices Supported:	including, but not limited to, Antifuse, Low Voltage, PROM, EPROM, EEPROM, Flash EEPROM, Microcontrollers, SPLD, CPLD, FPGA
Continuity Test:	each pin, including Vcc, ground, and signal pins, may be tested before every programming operation
Protection:	overcurrent shutdown; power failure shutdown; ESD protection, reverse insertion, banana jack for ESD wrist straps
Options:	available Socket Modules including, but not limited to, Universal PLCC, standard PLCC, PGA, CSP, BGA, µBGA, SOIC, QFN, MLF, LAP, QFP, TSOP, LCC, SDIP, PCMCIA, SIMM - JobMaster™ software, Advanced Feature Software, simple and complex serialization
Programming Yield:	assured by independent universal pin drivers on each socket, short distance from pin drivers to device, and accuracy of waveforms
Algorithms:	all algorithms are manufacturer approved or certified (if required) - BPM Microsystems has an excellent record of being first to provide certified algorithms for new devices
Algorithm Updates:	algorithm changes and updates are available, additional algorithms available by subscription after the first year

CE

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BPM MICROSYSTEMS - Setting the Standard in Device Programming
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BPM MICROSYSTEMS

1710

Universal Engineering Programmer

SEVENTH 7TH GEN GENERATION

1710

Universal Engineering Programmer

- Supports tens of thousands of devices with voltage down to 1.5V (Vdd) including EPROM, EEPROM, Flash EPROM, Microcontrollers, PLD, CPLD, FPGA and antifuse FPGAs
- Uses USB 2.0 communication
- With onboard memory capable of concurrent production programming
- FX4™ socket modules include 3 separate LED's per socket and allow the 1710 to program 4 devices simultaneously
- Compatible with all existing socket modules
- Patented solution to guard against passing blank parts - available only from BPM Microsystems
- Supports all device packages, including, but not limited to, DIP, SDIP, PLCC, TSOP, SSOP, PCMCIA, QFN, MLF, LAP, SOIC, LCC, QFP, PQFP, PGA, SIMM, CSP, BGA, µBGA, TQFP and TSSOP
- Ideal for design engineering and low-volume production
- Serialization support using standard, FX, FX2, and FX4 socket modules
- Jobmaster™ files portable to BPM Production programmers
- With on board memory capable of concurrent production programming
- Optional lever socket actuator available

Flash and Universal Support

The 1710 manual universal device programmer is manufactured for design engineering to low volume production. It has the versatility to program flash memory, microcontrollers, E/EPROMs, FPGAs, PLDs and more with any manual or automated socket module, including standard, high-speed FX™, and FX4™ socket modules. FX4™ socket modules are designed specifically for the 7th Generation series of programmers and have the capability of programming four devices simultaneously, enabling users to achieve greater productivity. With existing support for tens of thousands of devices and support for new devices added each day, the 1710 is certain to meet your device programming needs.

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BPM MICROSYSTEMS

1710
Technical Specifications

GENERAL

Power:	90-260VAC, 47-63 Hz., .12 KVA, IEC inlet connector for worldwide use
Dimensions:	11.75” (298mm) x 8.65” (220mm) x 4.68” (119mm)
Weight:	7.22 lbs. (3.28 kg)

SOFTWARE

Required:	BPWin
File Type:	including, but not limited to, binary, Intel, JEDEC, Motorola, POF, RAM, straight hex, Tekhex, Extended Tekhex, ASCII hex, Formatted Binary (.DIO), AFM, OMF, LOF, STAPL
Device Commands:	blank, checksum, compare, program, test, verify, erase, secure
Features:	JobMaster™, data editor, revision history, session logging, device and algorithm information

HARDWARE

Calibration:	Annual, may be verified on-site with optional socket module
Diagnostics:	Pin continuity test, ROM, CPU, pin drivers, power supply, communications, cable, calibration, verification timing, ADC, DAC
PC System Requirements:	Microsoft Windows XP/7
Operational Temperature:	41° to 104°F (5° to 40° C)
Memory:	512MB

PIN DRIVERS

Quantity:	240-pins standard
Analog Slew rate:	0.3 to 25V/µs
Vpp Range:	0-25V in 25mV steps
Ipp Range:	0-70mA continuous, 250mA peak
Vcc Range:	0-12V
Icc Range:	0-1A, 12µA resolution
Very low voltage:	to 1.5V (Vdd)
Rise Time:	800ps
Overshoot:	none
Clocks:	continuously variable 1 MHz to 30 MHz
Independence:	pin drivers and waveform generators are fully independent and concurrent

STANDARD ACCESSORIES

Included:	software on CD-ROM user manual on CD-ROM power cable data cable 1-year hardware warranty

FEATURES

File Loading:	automatic file type identification; supports Intel, JEDEC, Motorola S-record, POF, straight hex, hex-space, Tekhex and other file formats
Device Selection:	intelligent device selector allows you to type as little or as much of the part number as you like then choose from a list of devices matching your description
Devices Supported:	including, but not limited to, Antifuse, Low Voltage, PROM, EPROM, EEPROM, Flash EEPROM, Microcontrollers, SPLD, CPLD, FPGA
Continuity Test:	each pin, including Vcc, ground, and signal pins, may be tested before every programming operation
Protection:	overcurrent shutdown; power failure shutdown; ESD protection; banana jack for ESD wrist straps
Options:	available Socket Modules including, but not limited to, Universal PLCC, standard PLCC, PGA, CSP, µBGA, SOIC, QFP, TSOP, LCC, SDIP, PCMCIA, QFN, MLF, LAP, receptacle socket options, Advanced Feature Software, simple and complex serialization
Programming Yield:	assured by independent universal pin drivers on each socket, short distance from pin drivers to device and accuracy of waveforms
Algorithms:	all algorithms meet manufacturer approved specifications. BPM Microsystems has an excellent record of being first to provide certified algorithms for new devices
Software Updates:	Weekly updates with access to the latest algorithms are available throughout the year at no cost

CE

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